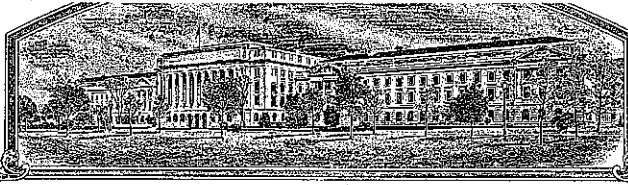


No.

200100199



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agripro Wheat, a business unit of Adianta USA

Whereas THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

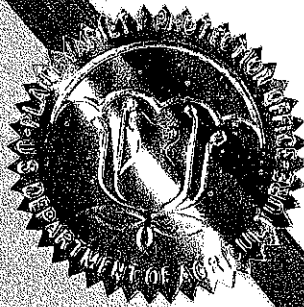
AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'NuFrontier'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this second day of April, in the year two thousand two.



Attest:

Paul M. Jabal

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Hereman

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the privacy Act of 1974 (5 U.S.C. 552a)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421) Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Agripro Wheat, a business unit of Advanta USA		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER W94-480w	3. VARIETY NAME NuFrontier
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 6515 Ascher Road Junction City, Kansas 66441		5. TELEPHONE (include area code) 1-785-210-0218	PVPO NUMBER 200100199 DATE 5/24/2001
		6. F2 1-785-210-0231	
7. GENUS AND SPECIES NAME <u>Triticum aestivum</u>	8. FAMILY NAME (Botanical) Gramineae		FILING AND EXAMINATION FEE 2705.00
9. CROP KIND NAME (common name) Hard White Winter Wheat			DATE 5/24/2001
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (common name) Corporation			CERTIFICATION FEE 320.00
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware	12. DATE OF INCORPORATION 1933		DATE 1/28/02
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dr. Rollin Sears 6515 Ascher Road Junction City, Kansas 66441			15. FAX (include area code) 1-785-210-0231

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (follow instructions on reverse)

a.	<input checked="" type="checkbox"/>	Exhibit A. Origin and Breeding History of the Variety
b.	<input checked="" type="checkbox"/>	Exhibit B. Statement of Distinctness
c.	<input checked="" type="checkbox"/>	Exhibit C. Objective Description of the Variety
d.	<input checked="" type="checkbox"/>	Exhibit D. Additional Description of the Variety
e.	<input checked="" type="checkbox"/>	Exhibit E. Statement of the Basis of the Applicant's Ownership
f.	<input checked="" type="checkbox"/>	Voucher Sample (2,500 viable untreated seeds, or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)
g.	<input checked="" type="checkbox"/>	Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)
☒ YES (if "yes", answer items 18 and 19 below) ☐ NO (if "no", go to item 20)

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO

19. IF YES TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?
☐ YES (if "YES", give names of countries and dates) ☒ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.


SIGNATURE OF APPLICANT (Owner(s)) 		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type) Dr. Rollin Sears		NAME (Please print or type)	
CAPACITY OR TITLE Hard Red Winter Wheat Breeder	DATE	CAPACITY OR TITLE	DATE

Exhibit A.

Origin and Breeding History of NuFrontier

NuFrontier is an F4 derived single plant selection from a Pioneer population designated HBK0927 with the pedigree: 2180 / HBZ356A // Mesa.

HBZ356A = W7469/SGW005//HGY002

SGW005 = NGEZI (A line Dr. Ian Edwards brought from Rhodesia, now Zimbabwe).

HGY002 = Tam 105

W7469 = a proprietary experimental soft wheat from Pioneer.

F3 seed of the population was obtained from Dr. T. Joe Martin, Kansas State University, Hays Kansas Experiment Station in the summer of 1990. The F3 population was planted in Nardin, OK during the fall of 1990 and advanced on the basis of good straw strength and the absence of leaf rust. The F4 population was planted in Berthoud, CO in the fall of 1991 and a single plant selection based on head fertility, good straw strength and the absence of disease was made. The resulting F5 plant row was tested in preliminary yield trials in 1993 and has subsequently been tested in replicated trials from 1994 through 2000.

In 1996, eighty-eight headrows were planted in Berthoud, Colorado. Seventy-two rows with uniform appearance were harvested and planted in a 0.1 acre initial Breeders seed increase in Berthoud, Colorado in 1997. In 1998, a five acre Breeders seed increase was grown in Vega, Texas. This increase produced 14,350 pounds of Breeders seed. In 2000 a 150 acre Breeders seed increase was grown in Blackfoot, Idaho which produced 13,172 bushels of Foundation seed.

NuFrontier has been uniform and stable since 1997. Less than 0.8% of the plants were rogued from the Breeders seed increase in 1997. Approximately 85% of the rogued variant plants were taller height wheat plants (8 to 15 cm). A red seeded variant of 0.5% has also been identified in the Breeders seed production plots. Up to 1% variant plants may be encountered in subsequent generations.

Exhibit B.
Statement of Distinctness

NuFrontier is most similar to the hard red winter wheat '2137'. However, it can be easily distinguished by the following morphological characteristics:

- NuFrontier is a hard white winter wheat. 2137 is a hard red winter wheat.
- NuFrontier expresses seedling anthocyanin (Berthoud, Colorado 1997, 1998, 1999). 2137 does not express seedling anthocyanin (Berthoud, Colorado 1995 and 1996).
- NuFrontier expresses auricle anthocyanin (Berthoud, Colorado 1997, 1998, 1999). 2137 does not express auricle anthocyanin.
- NuFrontier has an erect flag leaf at boot stage (Berthoud, Colorado 1997, 1998, 1999). 2137 has a recurved flag leaf at boot stage.
- NuFrontier expresses hairs on the last rachis of the internode (Berthoud, Colorado 1997, 1998, 1999). 2137 does not express hairs on the last rachis of the internode.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* Spp.)

NAME OF APPLICANT(S) Agripro Wheat, a business unit of Advanta USA	FOR OFFICIAL USE ONLY PVPO NUMBER 200100199
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 6515 Ascher Road Junction City, Kansas 66441	NAME OR EXPERIMENTAL DESIGNATION NuFrontier

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized standard may be used to determine plant colors; designate system used.

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1 1=Common 2=Durum 3=Club 4=Other (specify) _____

2. VERNALIZATION:

2 1=Spring 2=Winter 3=Other (specify) _____

3. COLEOPTILE ANTHOCYANIN:

2 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

2 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

2 1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

1 1 = Erect 2 = Recurved

2 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

0 0 Number of Days Earlier Than _____ *

0 4 Number of Days Later Than Oro Blanco *

8. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

0 7 cm Taller Than Oro Blanco *

0 0 cm Shorter Than _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1 1= Absent 2=Present

B. WAXY BLOOM

2 1=Absent 2=Present

C. HAIRINESS (*last internode of rachis*)

2 1=Absent 2=Present

D. INTERNODE (*specify number*)

1 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

2 1=Erect 2=Recurved

2 3 cm Length

11. HEAD (*at Maturity*):

A. DENSITY

2 1=Lax 2=Middense 3= Dense

B. SHAPE

2 1 = Tapering 2= Strap 3 = Clavate 4 = Other (*specify*)

C. CURVATURE

3 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

4 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (*at Maturity*):

A. COLOR

1 1 = White 2 = Tan 3 = Other (*specify*)

B. SHOULDER

2 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

3 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

2 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

2 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

1 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

1 1=Rounded 2=Angular

C. BRUSH

2 1=Short 2=Medium 3=Long

1 1 = Not Collared 2 = Collared

D. CREASE

1 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

1 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

13. SEED: (continued)

E. COLOR

☒ 1 = White 2 = Amber 3 = Red 4 = Other (specify) _____

F. TEXTURE

☒ 1 = Hard 2 = Soft

G. PHENOL REACTION (see instructions):

☒ 0 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input checked="" type="checkbox"/> 3	Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) Field races	<input checked="" type="checkbox"/> 3	Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) Field races
<input checked="" type="checkbox"/> 0	Stripe Rust (<i>Puccinia striiformis</i>)	<input checked="" type="checkbox"/> 0	Loose Smut (<i>Ustilago tritici</i>)
<input checked="" type="checkbox"/> 3	Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input checked="" type="checkbox"/> 0	Flag Smut (<i>Urocystis agropyri</i>)
<input checked="" type="checkbox"/> 0	Halo Spot (<i>Selenophoma donacis</i>)	<input checked="" type="checkbox"/> 0	Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>)
<input checked="" type="checkbox"/> 0	<i>Septoria nodorum</i> (Glume Blotch)	<input checked="" type="checkbox"/> 0	Dwarf Bunt (<i>Tilletia controversa</i>)
<input checked="" type="checkbox"/> 0	<i>Septoria avenae</i> (Speckled Leaf Disease)	<input checked="" type="checkbox"/> 0	Karnal Bunt (<i>Tilletia indica</i>)
<input checked="" type="checkbox"/> 3	<i>Septoria tritici</i> (Speckled Leaf Blotch) Field races	<input checked="" type="checkbox"/> 3	Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) Field races
<input checked="" type="checkbox"/> 0	Scab (<i>Fusarium</i> spp.)	<input checked="" type="checkbox"/> 0	Snow Molds
<input checked="" type="checkbox"/> 0	Black Point (Kernel Smudge)	<input checked="" type="checkbox"/> 0	Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input checked="" type="checkbox"/> 0	Barley Yellow Dwarf Virus (BYDV)	<input checked="" type="checkbox"/> 0	Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input checked="" type="checkbox"/> 3	Soilborne Mosaic Virus (SBMV) Field races	<input checked="" type="checkbox"/> 0	Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input checked="" type="checkbox"/> 3	Wheat Yellow (Spindle Streak) Mosaic Virus Field races	<input checked="" type="checkbox"/> 0	Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input checked="" type="checkbox"/> 0	Wheat Streak Mosaic Virus (WSMV) Field races	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/>	Other (specify) _____	<input type="checkbox"/>	Other (specify) _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 0	Hessian Fly (<i>Mayetiola destructor</i>)	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/> 0	Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/> 0	Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/> 0	Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/> 0	Greenbug (<i>Schizaphis graminum</i>)	<input type="checkbox"/>	Other (specify) _____
<input type="checkbox"/> 0	Aphids		_____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

Exhibit D.
Additional Description of NuFrontier

NuFrontier is a hard white winter wheat bred and developed by Agripro Wheat. NuFrontier is a medium height wheat with medium maturity and good straw strength. NuFrontier is moderately susceptible to Leaf rust and Stem rust, and has moderate resistance to Powdery mildew. Milling and baking characteristics are acceptable.

Juvenile growth habit is semierect. Seedling anthocyanin is present. Plant color at boot stage is green. Auricle anthocyanin and auricle hairs are present. Flag leaf at boot stage is erect and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is strap and awned. Glumes are glabrous, medium in width and length with oblique shoulders and acuminate beaks. Seed shape is ovate. Brush hairs are medium in size. Seed crease depth is shallow and width is narrow. Seed cheeks are rounded.

NuFrontier is well adapted to traditional hard red winter wheat growing regions.

200100199

AGRIPRO

Plains Team Quality Summary

Flour/Wheat Quality										Baking Quality										
Mixogram					Crumb															
Year-Loc	Prot	Flr	Norris	Hard	Flr	Ash	Peak		Tol.	Abs	Mix		Loaf	Grain		Tex	Color	Over		
							Time	HT			min	R		cc	R				R	R
14%mb	14%mb	R	%	R	%	N.U.	mm	R	%	R	min	R	cc	R	R	R	R			
W94-480W																				
1995 - GK	13.3	12.1	4	59	70.3	3	3.50	5.3	896	6	64.0	4	3.50	3	855	4	5	3	3	50
1995 - NI	9.9	8.9		86	72.7		3.50	4.8	1114		59.0		3.50		600		4	3	3	%R
1996 - GK	13.7	12.8	4	46	71.3	4	3.75	5.0	1097	4	63.0	4	3.75	1	915	6	7	2		49
1998 - GK	12.2	11.4		79	71.2		0.406	4.25	5.0	977		63.0		4.25	1000		4	3	2	
1999 - PX	12.0	11		55	68.4		4.50	5.3	876		63.0		4.50		810		4	2	1	R
2000 - CP		11.5		125	68.7		0.446	4.00	5.0	1160		60.5		4.00	940		4	3	3	
2000 - SP		12.5		117	68.3		0.476	3.50	4.8	1164		60.0		3.50	965		5	3	3	S
Average:	12.2	11.5	4	81	70.1	4	0.443	3.86	5.0	1041	5	61.8	4	3.86	2	869	5	5	3	50
ORO BLANCO																				
1995 - GK	13.4	12	4	51	68.6	4	5.25	5.3	1179	5	65.0	4	5.25	1	800	4	5	3	3	47
1995 - NI	10.8	9.4		80	70.1		4.00	5.0	1072		60.0		4.00		685		4	4	3	
1996 - GK	13.7	12.4	4	49	69.4	5	4.00	5.0	1417	3	62.0	5	4.00	1	930	6	5	2		45
1998 - GK	13.0	11.7		87	69.9		0.376	4.75	5.0	1070		64.0		4.75	925		3	3	3	
1999 - PX	12.3	10.9		73	69.5		4.25	5.3	867		62.0		4.25		850		4	2	1	
2000 - CP		12.2		130	66.5		0.464	4.50	5.0	1304		62.0		4.50	1000		3	3	4	
2000 - SP		12		118	69.6		0.484	4.25	5.0	984		60.5		4.25	910		3	3	3	
Average:	12.6	11.5	4	84	69.1	5	0.441	4.43	5.1	1128	4	62.2	5	4.43	1	871	5	4	3	46

200100190

Var./Line	Heading	Maturity	Coleoptile	Height	Straw Strength	Leaf Rust Severity	Reaction	Stem Rust Severity	Powdery Mildew	Hessian fly	WSMV	SBMV	SSMV
W94-480W	5	4	3	4	4	3	7	2	4	7	6	4	5
TOMAHAWK	4	4	4	4	4	2	3	3	3	8	8	3	4
ORO BLANCO	3	3	6	3	3	6	8	3	7	9	7	4	4

Data generated in 1994:

Colorado - Yield, Test Wt., Heading, Pollination, Maturity, Height,
 Leaf Rust (greenhouse screening), Powdery Mildew, Hessian fly,
 Coleoptile length
 Salina, KS - Yield
 Garden City, KS - Leaf rust, Shatter
 Goodland, KS - Yield, WSMV (Visual screening)
 Hays, KS - WSMV (Visual screening).
 Nardin, OK - Yield, Test Wt., Septoria nodorum, Leaf rust, Green leaf retention
 Dumas, TX - Yield, Test Wt.

Data generated in 1995:

Colorado - Yield, Test Wt., Heading, Lodging severity, Leaf rust,
 Powdery mildew, Hessian fly, Aluminum tolerance (Lab Screen),
 Coleoptile length
 Salina, KS - Heading, Height, Leaf rust, Septoria
 Everest, KS - Solborne, Green leaf retention
 Beloit, KS - Tan spot
 Goodland, KS - Yield, Test Wt., Lodging severity
 Saint John, KS - Spindle Streak
 Hugoton, KS - Yield, Test Wt. Shatter, Leaf rust
 Hereford, TX - Yield, Test Wt.
 Imperial, NE - Yield, Test Wt.
 Nardin, OK - Septoria, Green leaf retention

Data generated in 1996:

Colorado - Yield, Heading, Pollination, Maturity, Height, Lodging
 Leaf Rust (greenhouse screening), Powdery Mildew, Hessian fly,
 Coleoptile length, Aluminum Tolerance (Lab screening)
 Imperial, NE - Yield, Lodging
 Salina, Everest, KS - Winterkill, Maturity
 Goodland, KS - Yield, Test Wt., Heading, Maturity, Septoria
 Goodland, KS (Irrigated) - Yield, Lodging, Septoria, Wheat Streak
 Garden City, KS - Maturity
 Nardin, OK - Yield, Test Wt., Maturity
 Hays, KS - WSMV (Visual screening).

Data generated in 1997:

Colorado - Yield, Test Wt., Heading, Height, Leaf Rust, Lodging Severity,
 Powdery mildew, Hessian fly, Aluminum tolerance, Coleoptile length
 Goodland, KS - Yield, Test Wt.
 Beloit, KS - Leaf Rust, Tan Spot
 Salina, KS - Heading, Leaf Rust, Septoria
 Quinter, KS - Yield, Test Wt., Leaf Rust, Tan Spot, Lodging Severity

Data generated in 1997 Continued:

Hugoton, KS - Yield, Test Wt.
 Hugoton, KS (Irrigated) - Yield
 Enid, OK - Aluminum Tolerance
 Nardin, OK - Heading, Maturity, Leaf Rust, Septoria
 Vernon, TX - Leaf Rust
 Paxton, NE - Winterhardiness
 Geneva, NE - Leaf Rust, Green Leaf Retention

Data generated in 1998:

Colorado - Yield, Test Wt., Heading, Maturity, Height, Lodging Severity,
 Powdery mildew, Coleoptile length
 Goodland, KS - Yield, Test Wt., Heading, Spring Growth
 Beloit, KS - Leaf Rust, Tan Spot, Maturity, Lodging severity
 Salina, KS - Height, Maturity, Mill & Bake
 Quinter, KS - Heading, Lodging Breakage, Spring Growth
 Hugoton, KS - Yield, Test Wt.
 Haven, KS - Maturity, Powdery Mildew
 Enid, OK - Aluminum Tolerance
 Nardin, OK - Leaf Rust, Tan Spot, Septoria
 Paxton, NE - Yield, Test Wt.
 MacGregor, TX - Leaf Rust, Maturity

Data generated in 1999:

Colorado - Yield, Test Wt., Heading, Height, Maturity, Lodging Severity,
 Goodland, KS - Winterkill, Spring Growth
 Salina, KS - Yield, Test Wt., Soil Borne
 Quinter, KS - Yield, Test Wt., Mill & Bake
 Hugoton, KS - Yield, Test Wt.
 Haven, KS - Spindle Streak
 Manhattan, KS - Soil Borne
 Wichita, KS - Soil Borne, Spindle Streak
 Paxton, NE - Yield, Test Wt.
 Bruning, NE - Winterkill, Maturity, Leaf Rust, Septoria,
 MacGregor, TX - Leaf Rust, Maturity
 Hays, KS - WSMV (Visual screening).

Note: Rankings in this table represent the average for a given trait on a 1-9 scale where 1 and 9 represent the extremes for the respective traits.

Trait	1	9
Heading	early	late
Maturity	early	late
Coleoptile	long	short
Height	short	tall
Straw Strength	strong	weak
All disease & insect ratings	resistant	susceptible

1999 AGRIPO WHEAT
OVERYEARS SUMMARY
WHITES

VARIETY	YIELD bu/ac					TEST WEIGHT lb/bu					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998
(Number of Locations)	(5)	(5)	(5)	(4)	(3)	(4)	(3)	(5)	(2)	(4)	(3)
HAWK	68.0						61.4				
TOMAHAWK	67.6						60.7				
2163	65.8						59.7				
KARL92	65.5						61.0				
RIO BLANCO		53.5						59.3			
ARLIN		60.0	61.2	69.2	60.7	88.0		59.3	61.0	61.9	61.2
ORO BLANCO		54.5	56.7	66.8	52.3	80.5		57.8	58.6	61.4	60.2
PLATTE		56.6	58.1	72.9	54.5	79.9		60.2	61.5	62.5	60.3
BETTY		64.1						58.9			
W94-480W	72.4	53.1	62.4	70.9	62.2	59.1	62.0	59.6	60.0	61.0	59.1
MEAN		60.5	59.5	67.3	55.1	80.9		58.1	58.6	60.3	58.4

200100199

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Agripro Wheat, a business unit of Advanta, USA	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER W94-480w	3. VARIETY NAME NuFrontier
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 6515 Ascher Road Junction City, Kansas 66441	5. TELEPHONE (include area code) 1-785-210-0218	6. FAX (include area code) 1-785-210-0231
7. PVPO NUMBER 200100199		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
10. Is the applicant the original owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following:	
a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	
b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	
11. Additional explanation on ownership (if needed, use reverse for extra space):	

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2500 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

Exhibit E.
Statement of the Basis of Applicant's Ownership

The variety for which Plant Variety Protection is hereby sought was developed by Dr. John Moffatt, an employee of Agripro Wheat. By agreement between employees and Agripro Wheat all rights to any invention, discovery, or development made by the employee while employed by Agripro Wheat, were assigned to Agripro Wheat, with no rights of any kind pertaining to 'NuFrontier' being retained by the employees.

The variety 'NuFrontier' is owned by Agripro Wheat, a business unit of Advanta USA.